

2D Animation

Design an advertisement using any open source 2D animation tool

AIM:-

To create an advertisement using any open source 2D animation tool.

TOOL TAKEN: Blender

TOOL DESCRIPTION:-

Blender is a free and open source 3D creation suite. It supports the entirety of the 3D pipeline - modeling, rigging, animation etc. It can also be used for 2D.

INSTALLATION:-

1. Install from official website or Steam.

EXECUTION:-

1. Press shift+a and add Torus from Mesh.
2. Adjust the minor and major radius.
3. Switch from object mode to edit mode.
4. Create deformities by using proportional tool.
5. Switch back to object mode and smooth out surface.
6. Switch to edit mode and use the X-Ray tool and edit.
7. Press shift+d to create duplicate.
8. Press p to make something a different object.

3D Animation

Create a short film using only open source 3D animation tool

AIM:-

To create a short film using only open source 3D animation tool.

TOOL TAKEN: Blender

TOOL DESCRIPTION:-

Blender is a free, open source 3D creation suite. It supports the entirety of 3D pipeline - modeling, rigging, animation, simulation, rendering, compositing, motion tracking and video editing.

INSTALLATION:-

1. Install from official website (blender.org) or Steam.

EXECUTION:-

1. Create a new file in general mode.
2. Select a cuboid shape and press S to reshape it.
3. Using Shift + A add a plane, choose plane from mesh.
4. Make sure the cuboid is above the newly added plane.
5. Add multiple cubes by pressing Shift + A and selecting cube from it.
6. In order to make the cuboid move, select the cuboid and click on I, then set the location and set the timing and then move the cuboid and set the location.
7. Make changes in cubes to animate the surface.

Create and manage users, groups and their access rights by using DCL Commands

AIM:-

To create and manage users, groups and their access rights by using DCL commands. (i.e. Data Control Language). Also, to test the data integrity and consistency with ON DELETE / NULL options.

TOOL DESCRIPTION:-

To execute DCL commands as well as to test the data integrity and use MySQL. MySQL is a relation database management system developed by Oracle Corp. on SQL. The licenses are Eclass free/libre and Open Software.

INSTALLATION:-

1. Download MySQL installer and execute it.
2. Install the server instance and the config~~it~~ure it.
3. After installation, windows will open MySQL in the background automatically everytime.

EXECUTION:-

(a) DCL Commands:- GRANT and REVOKE

1. Create user example@'localhost' identified by 'mypass'.
2. Grant all on my_Table to example@localhost.
3. Grant select on users to example@localhost

4. Syntax for GRANT:-

GRANT SELECT, UPDATE ON MY_TABLE TO USER1, USER2;

5. Syntax for REVOKE:-

REVOKE SELECT, UPDATE ON MY_TABLE FROM USER1, USER2;

(b) Data integrity and consistency:-

ON DELETE CASCADE and ON DELETE SET NULL

1. Syntax for ON DELETE CASCADE:-

constraint

ON DELETE CASCADE

2. Syntax for ON DELETE SET NULL

constraint

ON DELETE SET NULL

The on-delete cascade is used to automatically remove the matching records from the child table when we delete the rows from parent table. on-delete set null is used to set the foreign key columns to null.

Open MP

Develop parallel program to perform Matrix Multiplication using Open MP constructs.

AIM:-

To develop a parallel program for matrix multiplication using Open-MP constructs.

TOOL DESCRIPTION:-

MXM-OPENMP , a code which sets up a dense matrix multiplication problem $C = A \times B$, using OpenMP for parallel execution. The matrices A and B are chosen so that $C = (N+1) \times 1$, when N is the order of 1 is the identity.

ALGORITHM:-

1. Define the number of rows of A,B,C matrix.
2. specify the number of chunks.
3. Compare thread id to identify master thread.
4. Input matrix A,B and store.
5. For iterative computation of each matrix, indicate a new thread.
6. Print the matrix as result.

MPI Library

Develop parallel program for all pairs shortest path problem using MPI library

AIM:-

To develop a parallel program for all pairs of shortest path using MPI library.

TOOL DESCRIPTION:-

This is a parallel implementation of Dijkstra's / Floyd shortest path algorithm for a weighted directed graph given as an adjacency matrix. It finds the shortest path from node to every other vertex.

ALGORITHM:-

1. Read the matrices which gives the adjacency of vertices.
2. Scatter the process.
3. Block row distribution among the process.
4. Convert a row of the matrix to a string and then print the string.
5. Implement distribution of Floyd / Dijkstra algorithm.
6. Find the shortest path between all pair of vertices.
7. Display the result.

NS3

Analyze the performance of connection, connectionless transport protocols in a simulation environment using NS3.

AIM

To analyze the performance of connection, connectionless transport protocols in a simulation environment using NS3.

TOOL DESCRIPTION

Setting up a network to do some real experiments is the best way for studying about communication in internet.

However setting up a network is expensive and not easy. For this reason, a virtual network provided by network stimulator is used for experimenting. NS3 is free and easy-to-use and popular all over the world.

INSTALLATION

1. Install Ubuntu Operating System, network animation,

2. Install NAM - sudo apt-get install - ynam

Install NS2 - sudo apt - get install - yns2

3. Declare stimulation and setting output file.

4. Setting node and link.

5. Setting agent

6. For UDP, we use UDP agent for sender and receiver set to null agent.

7. For TCP, we set sender agent as TCP agent and receiver as TCP using agent.

SETTING UP

1. UDP uses CBR application while TCP uses FTP application,
2. setting time schedule for simulation
3. Declare finish.

EXECUTION

1. To run the test file, "file-name.txt" is listed.
2. After simulation, NAM gets started. If it does not run, 'nan out nam' is entered.

Minix OS

AIM:-

To demonstrate Minix OS.

TOOL DESCRIPTION:-

Minix is a free open source operating system designed to be highly reliable and secure. It is based on a tiny microkernel running in kernel mode with the rest of OS running as a number of isolated, protected process as in user mode.

FEATURES:-

1. Small, pre-emptive, multitasking OS.
2. More modular and loadable than UNIX
3. Fault-tolerant
4. Used in the Intel management engine.
5. Reliable, self-healing, multi server VMX Core.

INSTALLATION:-

1. Download the CD-ROM Image (i.e. ISO file).
2. Install and mount the ISO file to a CD-ROM and then boot the computer from it. (If installing in PC).
3. Configure virtual machine to use the ISO file as its CD-ROM and then boot it. (If installing in VM).
4. Login as root and type "select".

MINIX COMMANDS:-

1. which - find the absolute path of each of commands.
2. cd - change directory
3. cp - copy files from one location to another
4. cat - concatenate
5. du - display the number of blocks used for files.
6. df - display the amount of disk space available.
7. find - walking a file hierarchy
8. ls - list files
9. more - read files and display the text one screen at a time.
10. ps - check the status of active processes.
11. rm - remove files you no longer need.
12. shutdown - shutdown the system.

shutdown -r : reboot

shutdown -h : halt

shutdown -d : power off